

## Frequently Asked Questions: Allied Paper Landfill

The Allied Paper Landfill is part of the Allied Paper/Portage Creek/Kalamazoo River Superfund site. The U.S. Environmental Protection Agency has held meetings recently to discuss possible cleanup options. Here are some of the questions – and the answers – asked at those meetings. This FAQ will be updated as needed. This version was created in April 2015.

Q. Does the contamination at Allied Landfill affect Kalamazoo drinking water wells?

A. No. EPA studied the groundwater at Allied Landfill and the flow patterns and found that the groundwater is not flowing toward the city well fields. Also, we have not detected PCBs in the groundwater at levels that pose a risk to human health.

Q. How has EPA cleaned up places similar to Allied Landfill?

A. We have used similar cleanup methods: consolidation and capping with long-term monitoring at King Highway Landfill, 12<sup>th</sup> Street Landfill and the Willow Boulevard/A-Site Landfill, all of which are PCB-contaminated paper-waste landfills that are part of the larger Kalamazoo River site. We have detected ~~There have only been X detections of PCBs in groundwater samples from King Highway X times in (X years) 1 landfill.~~ At 12<sup>th</sup> Street Landfill, groundwater monitoring has found PCBs 13 times in 224 samples since October 2011, and none posed a health risk to people. We have used the consolidation, capping and monitoring method at dozens of landfills in the Midwest. ~~The types of engineered structures put in place as a part a Superfund site cleanup are responsive to the particular risks posed by the site.~~

**Commented [BM1]:** Can't say this. We have not selected a remedy yet.

Q. The consolidation and capping alternatives in the Allied Landfill Feasibility Study do not include a bottom liner. Is it legal for a Toxic Substances Control Act landfill to not have a bottom liner? Is a landfill without a bottom liner safe?

A. Neither TSCA – the federal law that regulates PCBs and other toxic substances – nor its implementing regulations require landfills to have a bottom liner. ~~The TSCA regulations allow for a risk-based approach for closure of existing landfills which contain TSCA waste if such an approach can be shown to be protective. Based upon the conditions at Allied Landfill, a bottom liner is not necessary for a remedy to be protective.~~ The purpose of a bottom liner is to prevent the landfill wastes from leaching into and contaminating the groundwater beneath a landfill. In this case, ~~PCBs are tightly bound to the materials in the landfill and groundwater does not easily flow through the material, so it is unlikely the waste will contaminate the groundwater.~~ ~~The A consolidation and capping plan calls includes for a multi-layer engineered cap over the waste to prevent rain water from flowing through.~~ As a result, a bottom liner is not necessary.

Q. Will groundwater be prevented from contacting the bottom of the landfill so there will be no treatment costs?

A. ~~We don't expect groundwater treatment will be needed because of the nature of the paper-waste that makes up most of what's in the landfill. That material is roughly as porous as clay, so the groundwater doesn't flow through it easily.~~ In addition, PCBs tend to bond with organic material, like the paper-waste in the landfill, so they don't readily dissolve in water. We rarely find PCB concentrations in groundwater. ~~In fact, we have detected PCBs only once. This is supported by the sampling data from the existing treatment system which had only 1 PCB detection in X years of operation with monthly sample collection.~~ Therefore, it is not necessary to prevent contact between the bottom of the ~~Allied~~ Landfill and the groundwater.

Q. Could the cost of a remedy at Allied Landfill affect available funds for the river?

A. If the landfill cleanup costs more than the amount set aside for it in the trust, EPA might draw on site-wide funds that would otherwise be used to clean up the Kalamazoo River.

Q. Who will make sure that the landfill cleanup protects us long-term?

A. It is EPA's responsibility to make sure the cleanup protects people and the environment. If the cleanup includes waste managed on-site, there would be regular monitoring of the landfill cap and groundwater. ~~If there is a site-wide redevelopment, scenario we will take steps to ensure presence at the site would help ensure that the cleanup stays effective in perpetuity.~~

Q. Are there any alternative technologies that could be used to clean up Allied Landfill?

A. We looked closely at a ~~number~~ wide range of alternative technologies and concluded that none are viable options at Allied Landfill. To learn more, see Section 3 of the Allied Landfill Feasibility Study and a supplemental memorandum, both of which are at [www.epa.gov/region5/cleanup/alliedpaper/index.html](http://www.epa.gov/region5/cleanup/alliedpaper/index.html).

Q. ~~Would the new redevelopment alternative~~ a new cleanup alternative that allows for site-wide redevelopment protect people and the environment?

A. Yes. EPA can only select from among cleanup alternatives that are protective.

Q. What will be the cleanup standards ~~for the site?~~

A. EPA develops cleanup standards based on how the site may be used after cleanup and how people and animals might be exposed to remaining contamination. We will finalize the cleanup standards after we select a final cleanup plan. To learn more, see a discussion of potential cleanup standards in the Allied Landfill Feasibility Study at [www.epa.gov/region5/cleanup/alliedpaper/index.html](http://www.epa.gov/region5/cleanup/alliedpaper/index.html).

Q. ~~Would the addition of a new redevelopment alternative in the Feasibility Study mean that EPA would no longer consider removing all the contamination?~~ the total removal alternative would be taken out of the Feasibility Study?

A. ~~No. We will continue to consider removing all the material, as well as other options, until we choose a cleanup plan. EPA will not eliminate the total removal alternative from the Feasibility Study and will carry it forward through the remedy selection process.~~

Q. What are the costs associated with a remedy that keeps the waste in place?

A. Leaving waste in place requires long-term maintenance to ensure the cleanup continues to protect people and the environment over time. For Allied Landfill, EPA estimates ongoing maintenance of consolidation, capping and long-term monitoring would be \$5 million.

Q. ~~Under a new redevelopment alternative, why~~ Would stacking the waste higher cause contaminated water to be squeezed out, sending contamination into the groundwater?

A. Piling excavated material onto existing material would compress the underlying materials. During the design phase, we would take samples to determine if we need to add stabilization measures. We would also monitor the groundwater to see if we need to treat the groundwater. In the long term, compression of the materials could make them result in a lower permeability of the consolidated and underlying materials ~~more porous~~.